

# KCMO Health Department



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## Bioterrorism and Other Infectious Disease Threats A Local Perspective

Rex Archer M.D., M.P.H. , Director of Health June 6, 2000 1

# KCMO Health Department Evolving Priorities

I. Cultivating Our Community Health System

II. Every Child Needs a Healthy Start

III. Mental Health - Eliminating Hopelessness

IV. Healthy Lifestyles

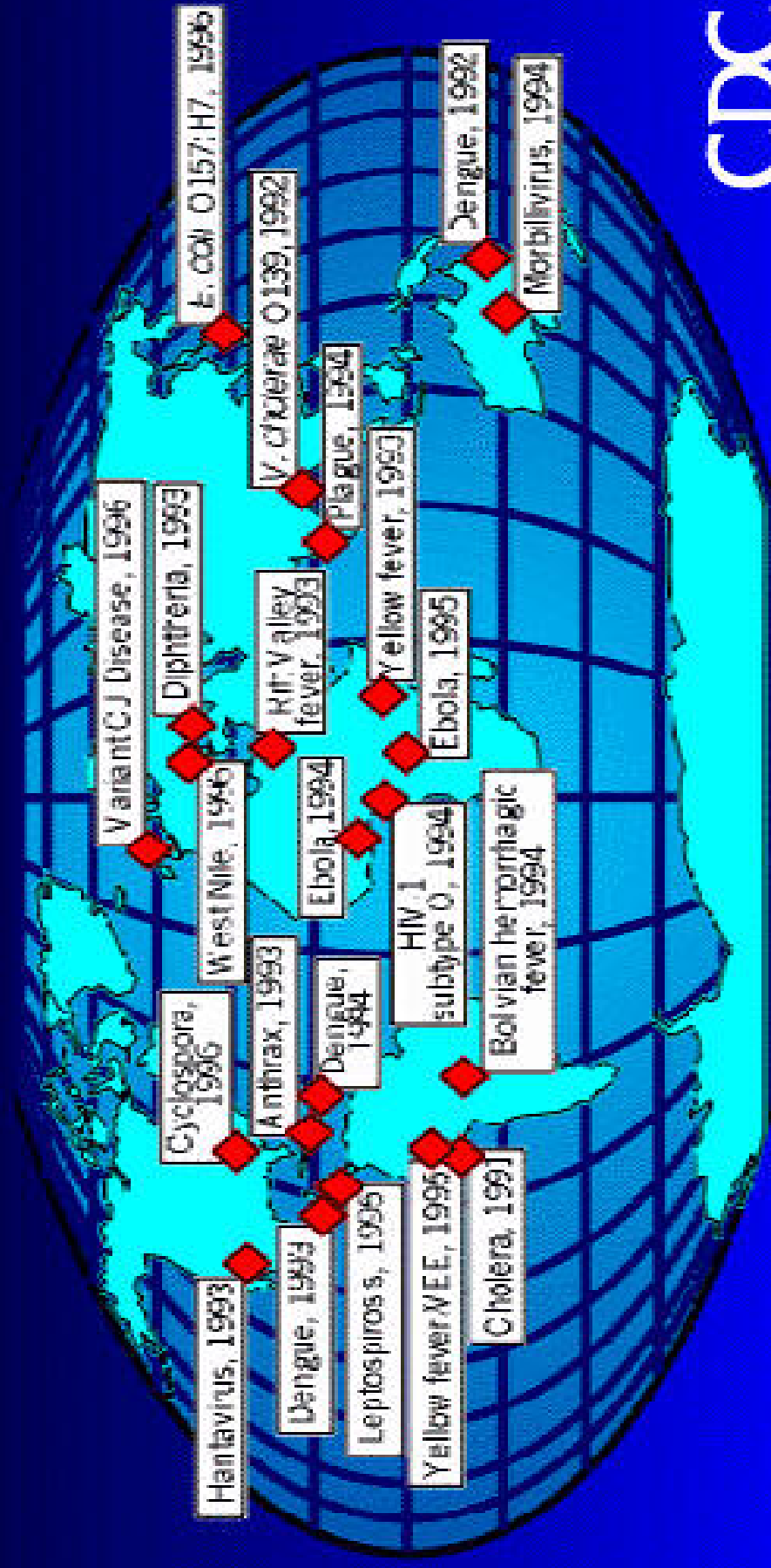
V. Communicable Disease & Bioterrorism

VI. Eliminating Health Disparities

# Total Number of Deaths in KCMO 1990 – 1998 Combined

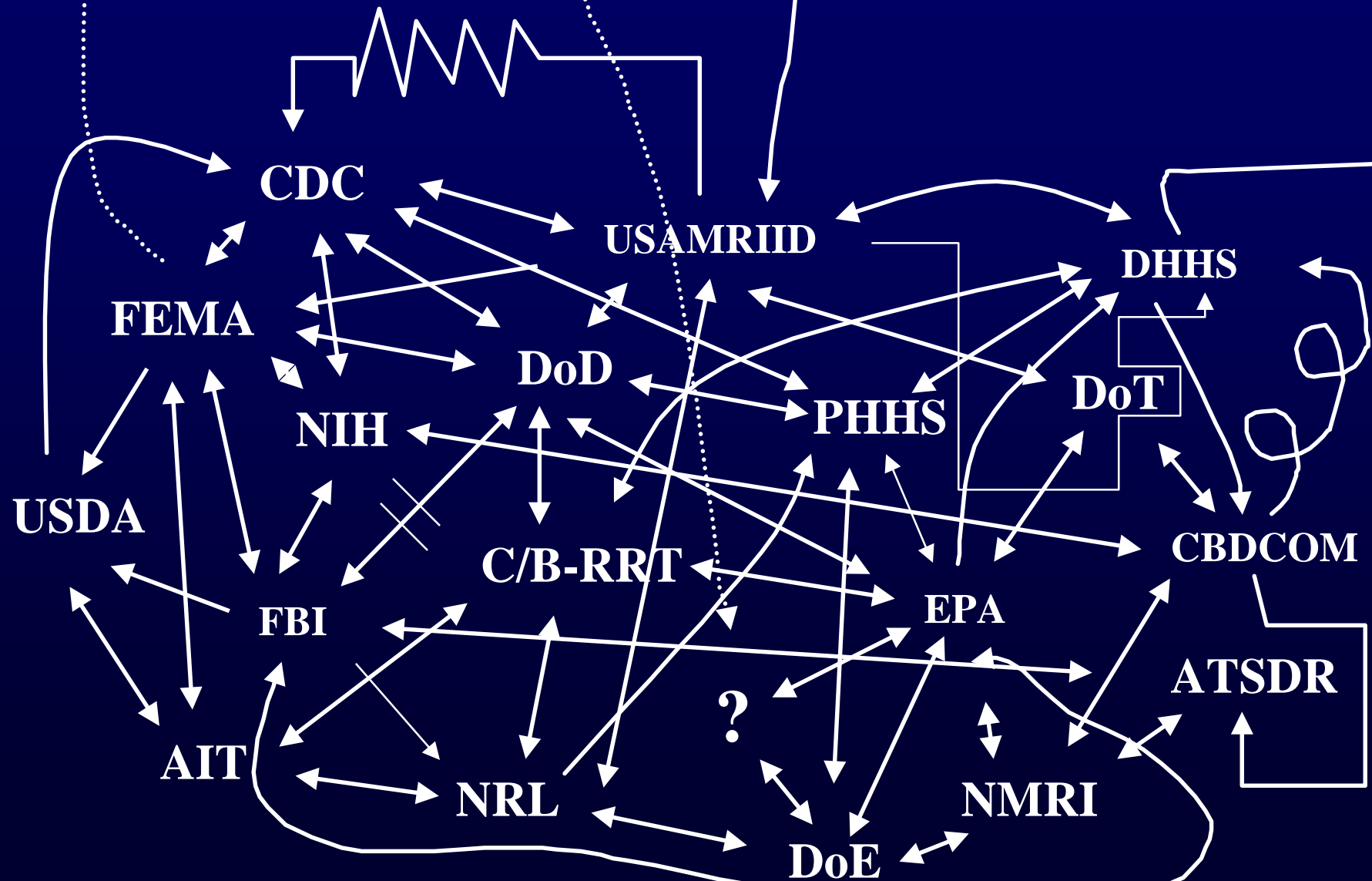
<u>Cause</u>	<u>Total</u>
Heart Disease	11533
Cancers	8800
Stroke	2514
Emphysema	1895
<b>Communicable Diseases</b>	<b>1513</b>
Unintentional Injuries	1496
<b>Influenza &amp; Pneumonia</b>	<b>1350</b>
Homicide	1048

# Global Microbial Threats in the 1990s

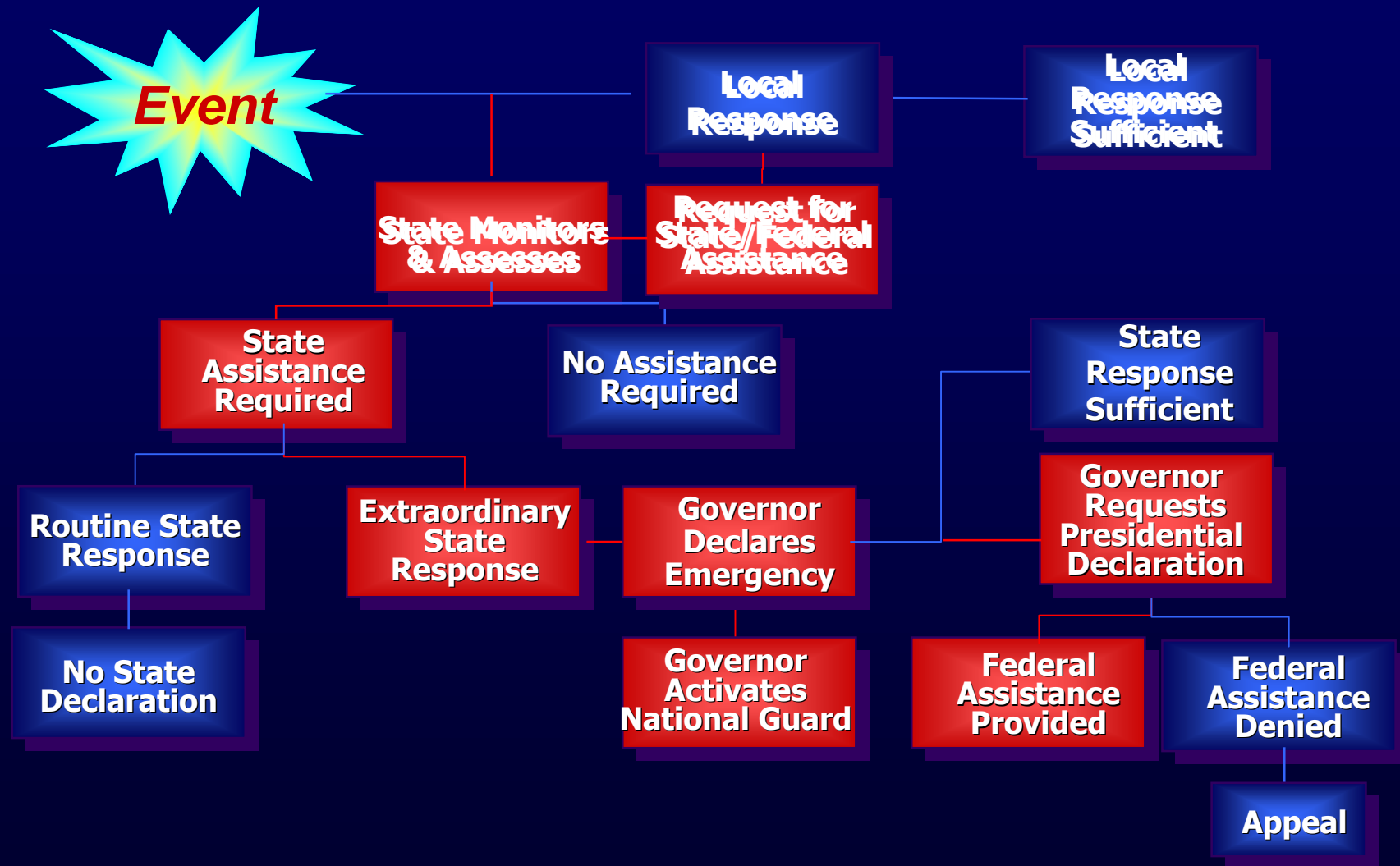




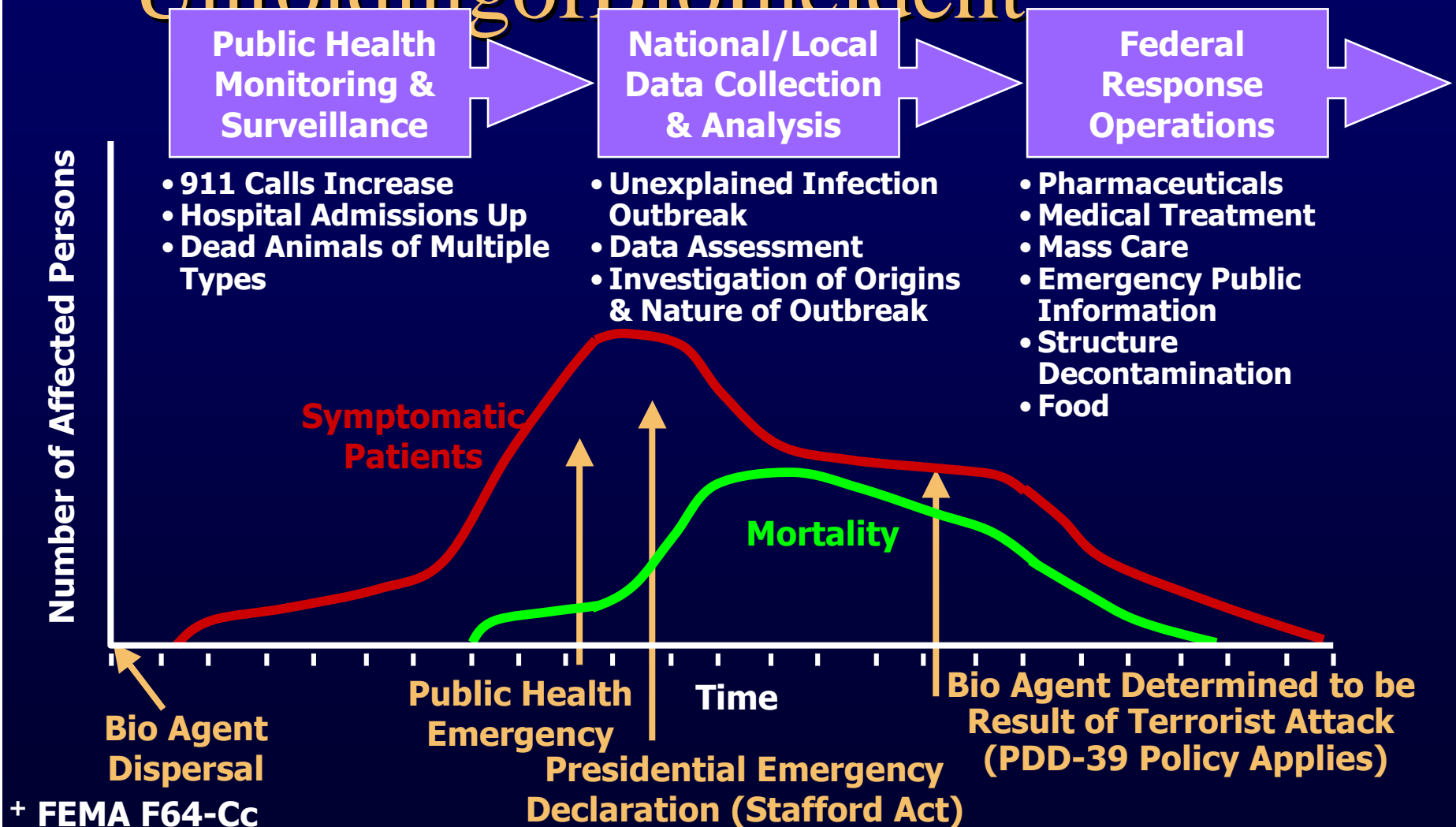
# *Government Response to a Bioterrorist Attack*



# Conventional Response Overview



# Unfolding of BioIncident



# Early Warning Surveillance and Reporting



- data capture and normalized baseline data:  
*“pulse of the city”*.
- local/regional data aggregation.
- incident recognition and rapid confirmation.
- initial incident size - up and rapid screen of surrounding geographical areas.

# DataElements for Bioincident Surveillance

## • HOSPITALS



### HospitalEmergencyDepartment :

#ofmedical(non -trauma)ERvisits.\*\*  
#ofhospitalnon -traumaadmissions.  
#ofinfectiousdiseasepatientsreported

## • EMS



### 911EmergencyMedicalServicesruns :

#ofnon -traumaEMSresponses.  
inthepast24 -hourperiod.

## • MEDICAL EXAMINER



### DeathsreportedtoMedicalExaminer/Coroner :

#ofdeathsreported.  
#ofmedicalexaminerccasespending.

## • PHARMACIES



### SentinelPharmacies :

#ofover -the-counter(OTC)flumedsand  
anti-diarrheals.

## • ANIMAL CONTROL



### Unusual #ofanimaldeaths

*Terrorist incidents involving biological agents will be very different from those employing chemical agents!*

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Biological agents are uniquely complicated because of:

- the large number of potential agents
- their long incubation periods
- the delayed onset of disease
- the potential for secondary spread

# Covert Exposure to Biological Agents

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- First recognition of an attack will probably be a disease outbreak
- The first line of a response to a civilian attack will emphasize rapid diagnosis and antimicrobial or antitoxin therapy or isolation  
Vaccine prevention will be concurrently utilized to prevent further spread
- Until specific identification is made, treatment will be symptom-based and probably use broad-spectrum drugs or mixtures of drugs aimed at pathogen families

# RESONSE CHARACTERISTICS

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BOTTOM-UP, NOT TOPDOWN

RAPID AND APPROPRIATE

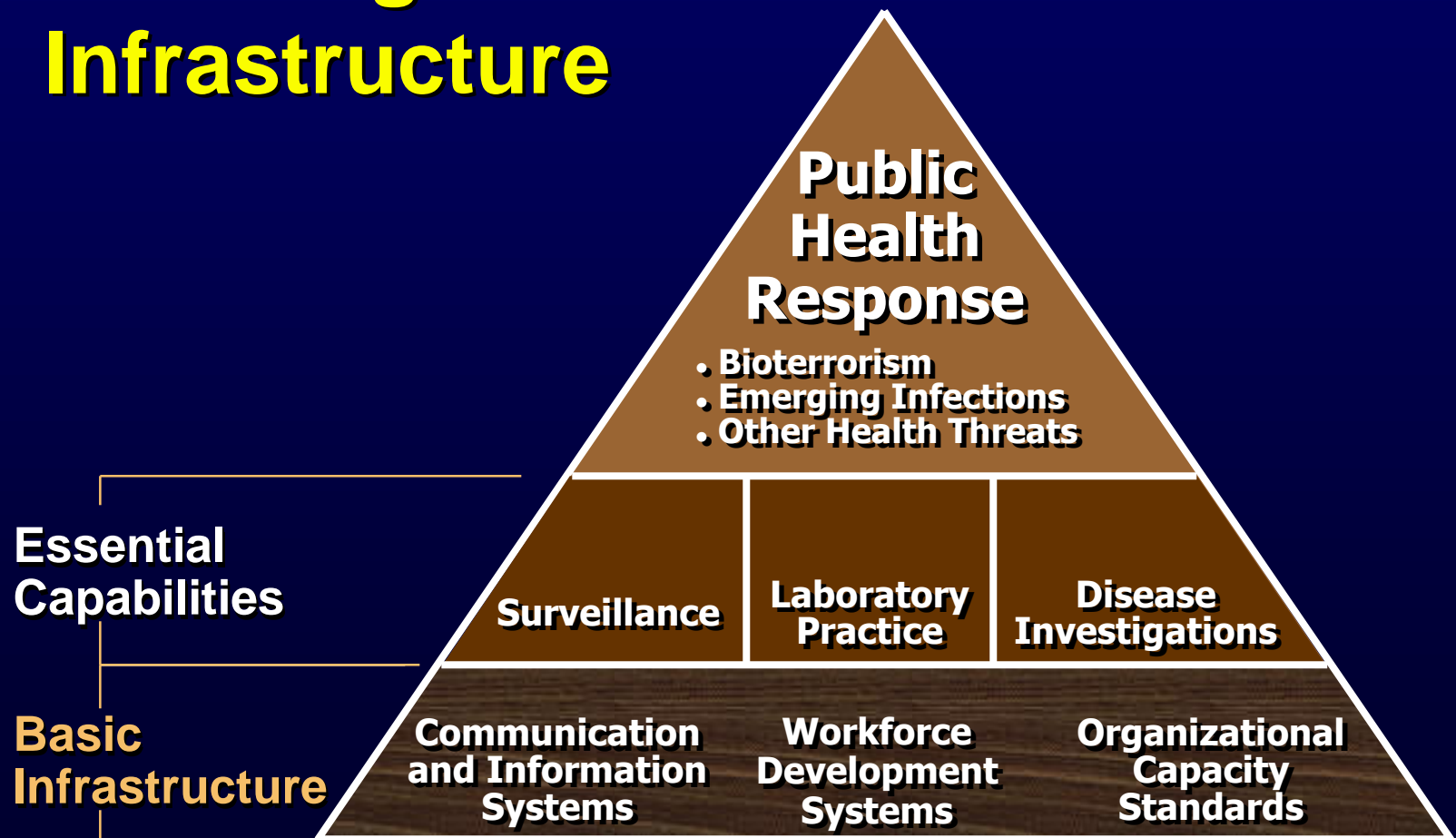
AUGMENTED REGULAR SYSTEM

HEALTH NEEDS FIRST

PROTECT THE INFRASTRUCTURE

*“BEPREPARED”*

# Assuring Public Health Infrastructure



# Infrastructure



# What Has Kansas City Done to Prepare for Bioterrorism Threats?

- January 1998, federal authorities began training emergency responders, physicians, and public health officials on bioterrorism.
- June 1999, desktop exercise using aerosolized plague release at Kemper Arena.
- July 1999, Dr. Rex Archer, Director of Health, made chair of NACCHO Bioterrorism and Emergency Response Taskforce.
- In July 1999, Health Department added a epid bioterrorism position to its surveillance unit.
- City Council HAN resolution - August 1999

# What Has Kansas City Done To Prepare for Bioterrorism Threats?

(continued)

- Continues support federal funding request of \$40 million in FY2000 for Health Alert Network & PH Threats    Frist-Kennedy
- added a PIO
- 24 hour duty officer within Health Department to assure rapid response Oct. 1, 1999
- Create active electronics surveillance system (MAST)
- Create first KCMO HDBioterrorism Response Plan - December 1, 1999

Acute Respiratory Distress Syndromes  
Influenza-Like Illnesses  
Unexplained Deaths  
Gastroenteritis  
Septic Shock  
Pneumonias  
Fever  
Rashes

REPORT

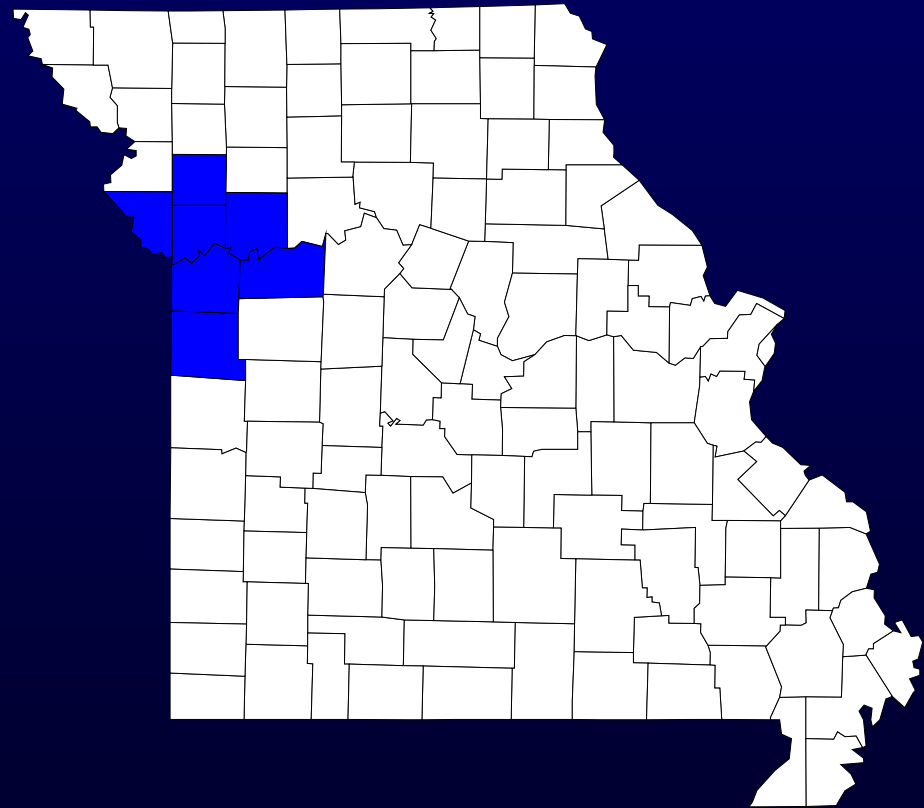
OUTBREAK!

Unusual clusters or abnormal increases can be the initial cases of an outbreak or a bioterrorist event.  
When in doubt, REPORT to the Kansas City, Missouri Health Department.

Twenty-four hour telephone available at 717-6721

# Kansas City Awarded \$96,000 for Regional Program

- Cass County
- Clay County
- Clinton County
- Jackson County
- Kansas City
- Lafayette County
- Platte County
- Ray County



# What More Can Kansas City Do To Prepare for Bioterrorism Threats? (continued)

- Broadcast/fax/Email communication with primary care physicians, infectious disease, emergency medicine, radiologists, MoALPHA, pathologists, and veterinary medicine, FBI, Mo&KsDOH, CDC, USAMRID, MOHAKCA, Media, etc.
- Update Disease Reporting Ordinance (<4hr suspected CDC Threat List)
- Increase surge capacity (4 to 25 to 50)
- Metro-wide MMR SBioterrorism Plan (Spring 2001)
- Conduct a full scale bioterrorism functional exercise?

# Public Health & Animal Diseases

- Sec.34 -71, of KCMO General Ordinances empower the Director of Health to issue regulations for the control of animal diseases and conditions declared dangerous or potentially dangerous to the health of the public.
- Sec.14 -7, the Director of Health can issue emergency or standing orders for zoonotic disease control.

# Revised Reporting Requirement? Clinical Hallmarks

Anthrax

Wide Mediastinum

Plague

Bloody Sputum

Smallpox

Face & Palmar Rash

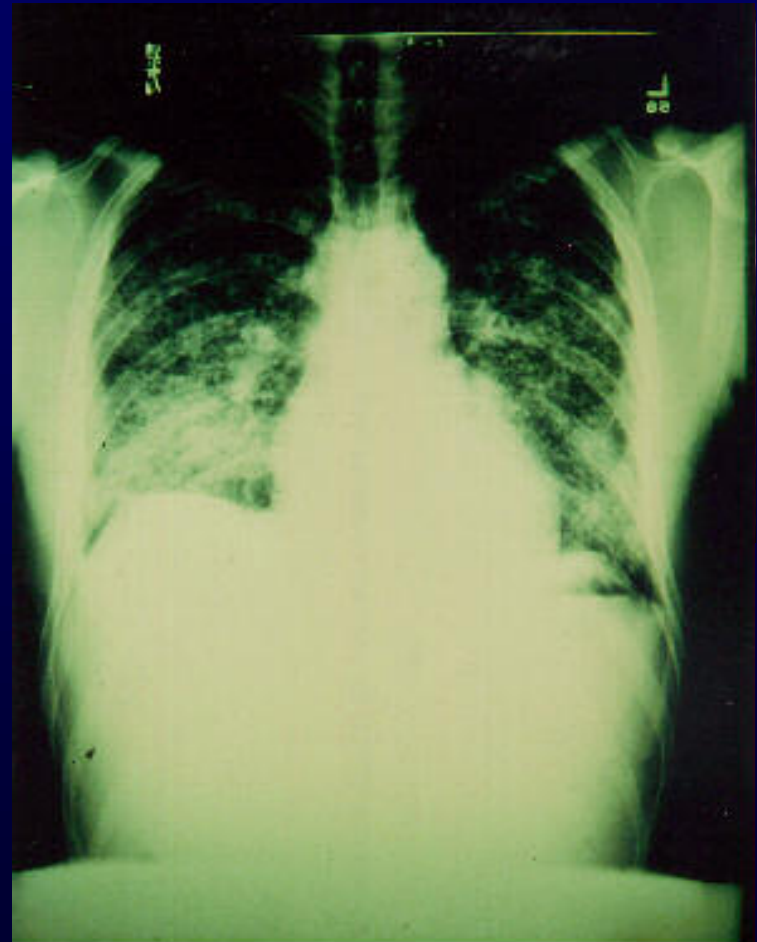
Botulinum

Flaccid Paralysis

# ANTHRAX

## Signs&Symptoms

- 2-6(90+)dayincubationperiod followedbyfever,myalgias, cough,andfatigue
- Initialimprovementfollowedby abruptonsetofrespiratory distress,shock,anddeathin24 to36hours
- Physicalfindingsarenon - specific
- Chestx -raymayshowwidened mediastinumwithpleural effusion



# SMALLPOX

## Signs&Symptoms



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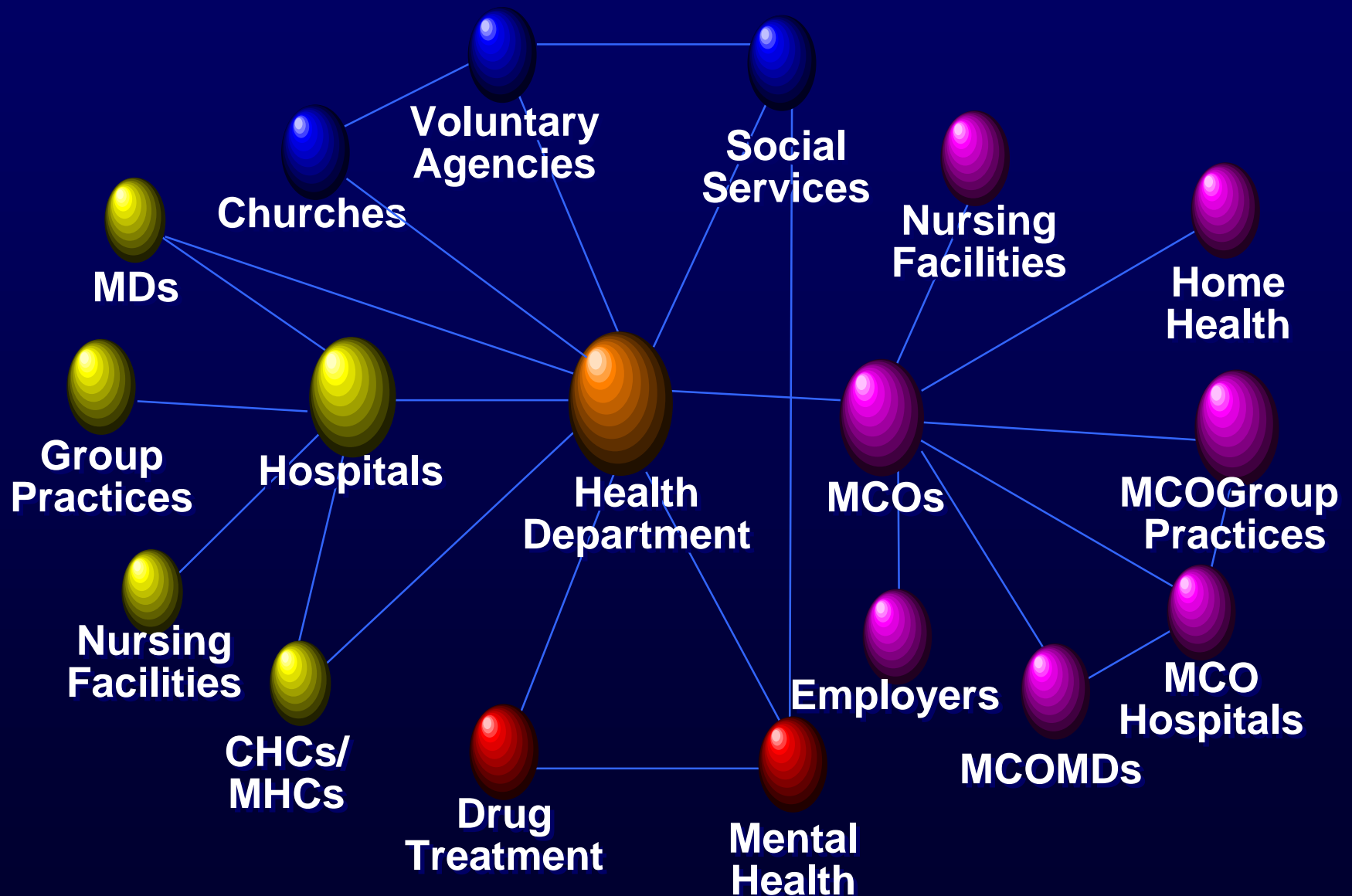
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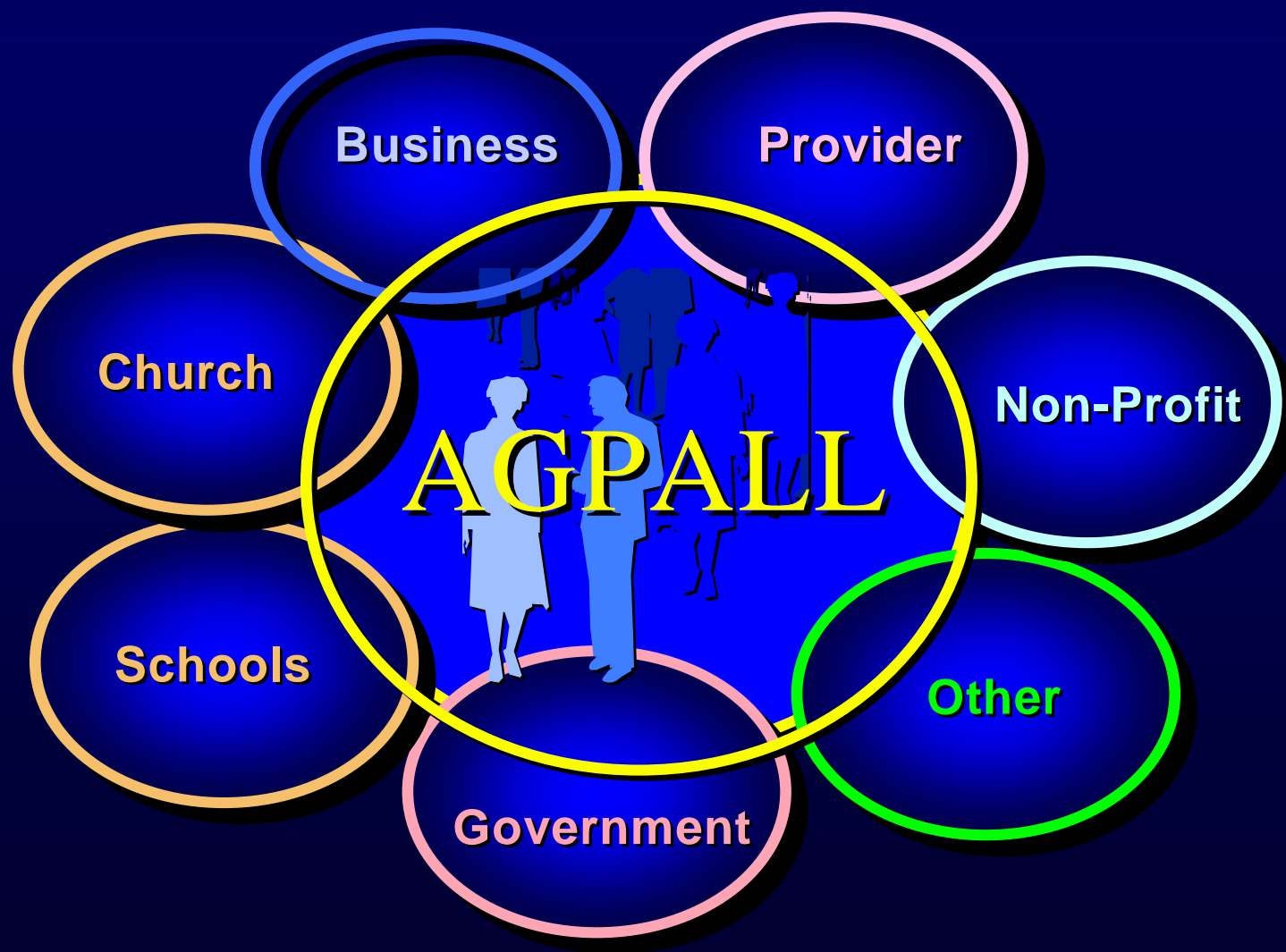
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# IntegratedCommunityHealthSystem

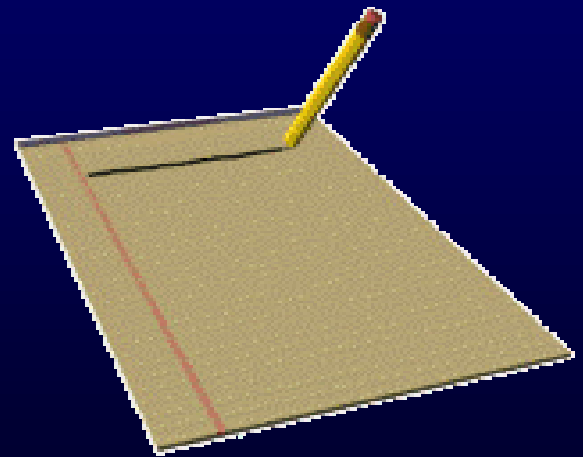


# Partnerships for the Public's Health



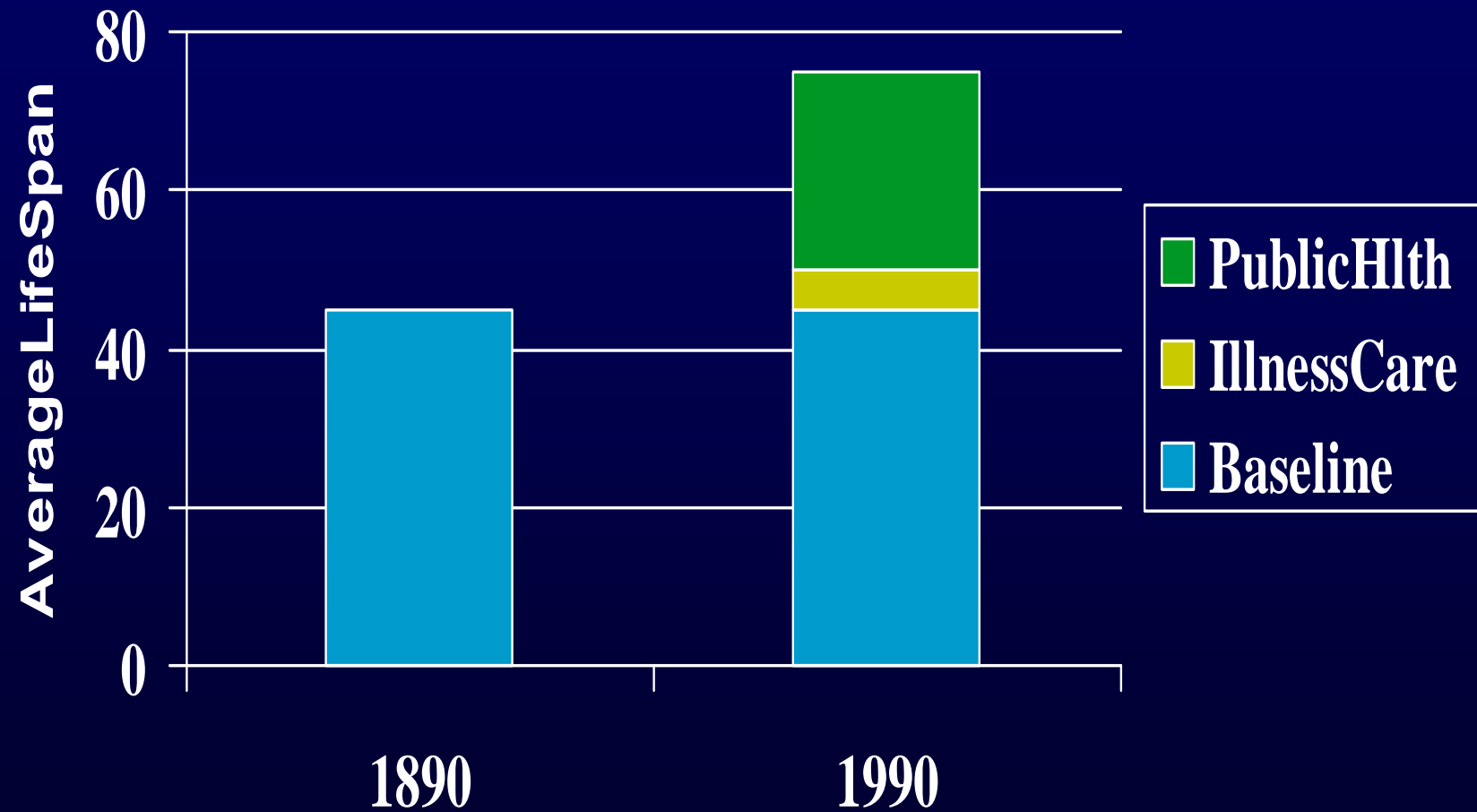
**Community Organizations**

# LESSONS LEARNED



**#1:** Enhancements to public health capacity have the potential to pay off, even if a bioterrorism event never takes place.

# IncreasedLifeExpectancy



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